

REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Discussion of Claim Amendments

Claims 1-25 remain in the form as presented with the applicants' prior Amendment.

Claims 26-28 are new. In this regard, claim 26 is in independent form and is substantively similar to claim 1 except that it emphasizes that a three-dimensional (3D) article is made (see page 2, lines 6-9, *"In the process according to the invention...the film can be used as such to make a three-dimensional (3D) moulded articles...."*) In addition, claim 26 emphasizes that the thermoplastic elastomer composition consists essentially of at least 50 mass% of a thermoplastic copolyether ester elastomer as a continuous phase thereof having polyether soft segments and polyester hard segments. (See page 3, lines 32-33 (*"...the composition generally contains more than 50 mass% of this thermoplastic elastomer...."*), page 4, lines 2-3 (*"...such that the at least one thermoplastic elastomer forms a continuous phase of the composition"*), page 4, lines 19-11 (*"Suitable examples of a thermoplastic elastomer containing polyether segments are for example segmented copolymers with so-called hard and soft segments, with the soft segment being a polyester...."*) and page 5, lines 11-12 (*"...the hard segment is a polyester...."*)).

Claim 26 also emphasizes that the plastic composition which is injection molded into the mold cavity is comprised of a polycarbonate or a thermoplastic polyester as a continuous phase thereof. (See page 8, lines 3-8 (*"The plastic composition may contain polymers [which form] a continuous phase of the composition."*), lines 19-20 (*"In the case of a copolyester ester-containing film, suitable plastic compositions are preferably based on a thermoplastic polyester or a polycarbonate"*) and lines 24-26 (*Suitable*

compositions are for example blends of PC and PET (PC/PET), PC and PBT (PC/PBT)....). Claims 27-28 are similarly based on the disclosure at page 8, lines 19-27.

Claim 26 also emphasizes that the mould cavity is heated to a temperature of at least 60°C but below a melt temperature of the thermoplastic elastomer so as to adhere the thermoplastic elastomer to the plastic composition. (See page 8, lines 15-18 (“...*the mould temperature is at least 60°C....Care should be taken, however, to avoid too high a mould temperature for a given film, since this might result...in melting of the film.*”)

Therefore, following entry of this amendment claims 1-28 will remain pending herein for consideration.

2. Response to 35 USC §103(a) Rejections

Prior claims 1-25 attracted separate rejections as allegedly being “obvious” and hence unpatentable over each of Neumann (USP 3,839,129) or Loew (USP 3,654,062) combined with Minnick (USP 5,110,668). Applicants disagree.

The present patent invention is of course directed to a process for injection molding of a metallized plastic article, wherein a metallized film comprising at least one layer which consist essentially of a thermoplastic elastomer containing polyether segments is placed in a mold cavity, filling the mold cavity with a molten plastic composition by injection molding, followed by removing the article upon cooling of the plastic composition.

Because of the use of the film comprising the at least one layer consisting essentially of the thermoplastic elastomer containing the polyether segments, the following surprising advantages ensue:

1. It is very well possible to mold 3-D objects with the film;

2. The film remains intact, even if the article contains holes; and
3. The article shows a so-called soft touch character.

For a further discussion about these advantages, the Examiner is encouraged to re-read page 1 and 2 of the originally filed specification.

Neumann is directed to a process for injection molding of a metallized plastic article, wherein a metallized film is placed in a mold cavity and the mold cavity is filled with a molten plastic composition by injection molding. Neumann however shows a strong preference for the use of metallized polyethylene terephthalate (PET) films.

The problem of such films however is that the PET is not flexible enough. Therefore production of 3D objects will be difficult. Note also that Neumann only describes the production of mirrors, which are totally or almost flat, as is confirmed by the Figures. This is confirmed, because Neumann says that the film can be replaced by a metal foil, which equally is not flexible.

It should also be noted further that Neumann teaches that it is highly advisable to use the same polymer for the film and the body of the molded article. The body material in general is non-flexible. As described in Neumann's examples, an acrylic film and an acrylic polymer for the body is used, both of which are not flexible.

As such, the advantages of the present invention are not obtained by the film of Neumann and thus an ordinarily skilled person would not consider combining Neumann with Minnick.

Loew is very similar to Neumann and thus the arguments noted above are equally germane to the unobvious of the invention based on Loew and Minnick. Note also that in Loew the preferred film material is PET (see col. 1 of 59, mentioning Mylar™ (PET) film which is also mentioned in Neumann.

Loew also mentions some non-preferred films, however none of them is elastomeric. Also the articles showed in the figures of Loew are almost flat.

Therefore the advantages of the present invention are not obtained by the film of Loew.

The ordinarily skilled person knowing Neumann or Loew, will not have any incentive to combine either with Minnick. Specifically, in both Neumann and Loew no hint is given to use a *different* film, to be able to produce 3D articles and also having the other advantages listed above. Both Neumann and Loew also do not direct an ordinarily skilled person to the use of elastomeric films and certainly not towards thermoplastic elastomeric films. As such, there is no nexus between Neumann or Loew and Minnick.

Minnick on the other hand is not concerned injection molding at all. Indeed, the only disclosure of multiple plastic layers appears at column 12, line 40-44 of Minnick wherein “..a laminate made by melt laminating one or more layers of copolyetherester resin film with a layer of flexible fabric and a layer of metal substrate” is disclosed. At column 12, lines 46-52 further state that:

“The respective layers are deposited in the sequence as shown and described in FIGS. 1-5...and are subjected to temperatures which soften or melt the copolyetherester resin film while pressure is applied to uniformly seat the layers in such a manner that the respective layers contact each other while the copolyetherester resin film is in a softened or melted state.”

The passages noted above are most certainly not descriptive at all of an injection-moulding process and/or an injection-moulded article which results from such process as defined in the pending claims.

In addition, Minnick is only directed to laminates, having a fully flat structure. As such, Minnick even does not give a hint that the film can be used for 3-D structures.

Thus, the combination of either Neumann or Loew with Minnick would not result in the presently claimed invention. Withdrawal of the rejections advanced on such bases under 35 USC §103(a) is therefore in order.

New claims 26-28 are even further patentably distinguishable from the combinations of references advanced by the Examiner. Nowhere is there a suggestion or disclosure of a metallized film having at least one layer of a thermoplastic elastomer composition which consists essentially of at least 50 mass% of a thermoplastic copolyether ester elastomer as a continuous phase thereof having polyether soft segments and polyester hard segments, and a plastic composition forming the body of the injection-moulded articles which is a polycarbonate or a thermoplastic polyester. Moreover, no teaching is evident that the mould cavity is heated to a temperature of at least 60°C but below a melt temperature of the thermoplastic elastomer so as to adhere the thermoplastic elastomer to the plastic composition. In fact, as noted above Minnick actually teaches that the film is melted.

As such, the allowance of claims 26-28 together with prior claims 1-25 is in order. Such favorable action is solicited.

4. Response to Double Patenting Rejection

Applicants suggest that the double patenting rejection advanced on the basis of claims 1-25 of Application Serial No. 10/473,177 ("the '177 application") has been mooted since the '177 application has been abandoned. The Examiner's attention is

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however directed toward Application Serial No. 12/238,827 which was filed on September 26, 2008 as a continuation and during the pendency of the '177 application.

Withdrawal of the double patenting rejection based on the '177 application is therefore in order.

5. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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